



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,722	06/12/2001	Yasufumi Ichikawa	33677	4905

116 7590 04/05/2004

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

PEREZ, ANGELICA

ART UNIT	PAPER NUMBER
----------	--------------

2684

DATE MAILED: 04/05/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/879,722

Applicant(s)

ICHIKAWA, YASUFUMI

Examiner

Angelica M. Perez

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Csapo (Csapo et al.; US Patent No.: 6,411,825 B1).

Regarding claims 1 and 13 Csapo teaches of a transmission power control method, voltage controller and apparatus for controlling the power to transmit to the distant party (columns 3 and 7, lines 40-49 and 3-10 respectively; column 5, lines 35-38; e.g., different transmit power), comprising: a variable power amplifying step of respectively controlling digital-to-analog converter for generating an analog baseband signal (column 9, lines 21-28; e.g., baseband signals are generated), be supplied to a modulator (figure 4, item 78; e.g., modem) and provided in the former stage of a

modulator for frequency-converting a transmission signal to a signal in an IF band (column 9, lines 21-28; where the intermediate signal is provided by the modulator section of the modem), and a plurality of variable power amplifiers for variably amplifying the transmission signal modulated by the modulator (claims 1 and 4, lines 15-16 and 44-45).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 5-6, 7-9, 11-12, 14-15, 17-18, 19-21 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo (Csapo et al.; US Patent No.: 6,411,825 B1) in view of Fujita (Fujita, Masanori, EP 0,883,250 A2).

Regarding claims 7 and 19, Csapo teaches of a transmission power control method and apparatus for controlling the power to transmit to the distant party (columns 3 and 7, lines 40-49 and 3-10 respectively; column 5, lines 35-38; e.g., different transmit power).

Csapo does not specifically teach of the method comprising: a voltage controller controlling step consisting of controlling a plurality of voltage controllers that control a power amplifier for amplifying a transmission signal via separate bias systems.

In related art concerning transmission power control, Fujita teaches where the voltage controller controlling step consists of controlling a plurality of voltage controllers

Art Unit: 2684

(figure 4, items 26, 24, 25 and 9') that control a power amplifier for amplifying a transmission signal via separate bias systems (figure 4, items 24 and 25 represent the separate bias systems).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Csapo's power control method with Fujita's plurality of voltage controllers in order to through different arrangements, modify the control rate as preferred.

Regarding claims 2, 8, 14, and 20, Csapo teaches all the limitations of claims 1, 7, 13 and 19. Fujita teaches where a control ratio of the variable power amplifiers is modified and at least one of series and parallel control in a control range is made in the variable power amplifying step (figure 1, items 2, 3 and 4; where it is inherent to arrange amplifiers in linear and/or parallel positions in order to adjust control ratios as required).

Regarding claims 3, 9, 15 and 21, Csapo in view of Fujita teaches all the limitations of claims 2, 8, 14 and 20. Fujita further teaches of a detection step of detecting a state of at least one of a local station and a distant station; and a modification step of modifying the control ratio according to the detected state (column 13, lines 19- 47; where the detected states relate to position).

Regarding claims 5, 11, 17 and 23, Csapo in view of Fujita teach all the limitations of claims 3, 9, 15, and 21. Fujita further teaches where the control ratio according to the state of at least one of the local station and the distant station is adaptively modified in the modification step (columns 7, lines 28-30; changes are made as conditions change).

Regarding claims 6, 12, 18 and 24, Csapo and Fujita teach all the limitations of claims 1, 7, 13 and 19. Fujita further teaches where a control sensitivity of each of the plurality of variable power amplifiers differs from each other (figure 1, items 2, 3 and 4; where it is inherent of variable power amplifiers to differ regarding control sensitivity due to physical conditions such as position, interference, etc.).

Claims 4, 10, 16 and 22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo in view of Fujita, further in view of Davidovici (Davidovici et al.; US Patent No.: 5,963,583).

Regarding claims 4, 10, 16 and 22, Csapo in view of Fujita teaches all the limitations of claims 3, 9, 15 and 21.

Csapo in and in further view of Fujita does not teach where a plurality of the states of at least one of the local station and the destination station are detected in the detection step, where the control ratio is modified by using fuzzy control rules and fuzzy inference that are based on the plurality of states in the modification step.

In related art concerning fuzzy-logic adaptive power control, Davidovici teaches of a plurality of the states of at least one of the local station and the destination station are detected in the detection step, where the control ratio is modified by using fuzzy control rules and fuzzy inference that are based on the plurality of states in the modification step (column s 3 and 4, lines 18-20, 34-39 and 53-60; where the interference is indicated by the S/N ratio and the states are based on position).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Csapo's and Fujita's power control method with

Art Unit: 2684

Davidovici's Fuzzy-logic controller as an alternative method to manage the constantly changing detection states.

Art Unit: 2684

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 703-305-8724. The examiner can normally be reached on 7:15 a.m. - 3:55 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.


Angelica Perez
(Examiner)


NAY MAUNG
SUPERVISORY PATENT EXAMINER

Nay A. Maung
(SPE)

Art Unit 2684